

Application No: 10/810,019 Docket No.: Q198-US1

Page 2

RECEIVED  
CENTRAL FAX CENTER

MAY 12 2008

IN THE CLAIMS

Please amend the claims as follows:

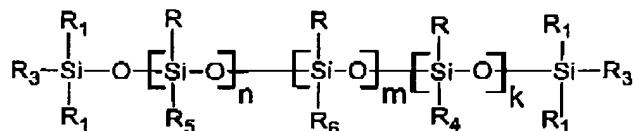
1. (previously presented) An electrochemical device, comprising:  
an electrolyte including a polysiloxane having a backbone, the backbone including one or more terminal silicons linked to at least one side chain that includes a carbonate moiety.
2. (canceled)
3. (previously presented) The device of claim 1, wherein the carbonate moiety is a cyclic carbonate moiety.
4. (currently amended) The device of claim 1, wherein at least one of the terminal silicons is linked to the side chain that includes the carbonate moiety and another of the terminal silicons is linked to at least one side chain that includes a poly(alkylene oxide) moiety, moiety.
5. (previously presented) The device of claim 4, wherein an organic spacer is positioned between the poly(alkylene oxide) moiety and the backbone.
- 6-8. (canceled)
9. (previously presented) The device of claim 1, wherein each terminal silicon is linked to at least one side chain that includes the carbonate moiety.
10. (previously presented) The device of claim 9, wherein each non-terminal silicon is linked to at least one side chain that includes a poly(alkylene oxide) moiety.
11. (canceled)

Application No: 10/810,019 Docket No.: Q198-US1

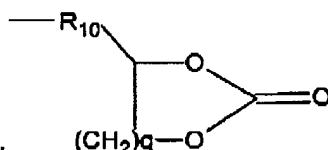
Page 3

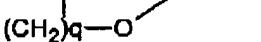
12. (previously presented) The device of claim 1, wherein the at least one side chain includes an oxygen linked to a silicon on the backbone.

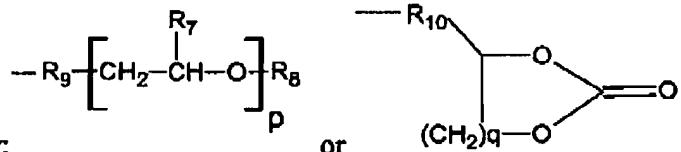
13. (currently amended) The device of claim 1, wherein the polysiloxane is represented by:



where R is alkyl or aryl; R<sub>1</sub> is alkyl or aryl;



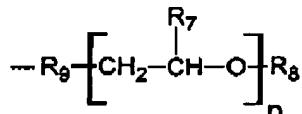
at least one of the R<sub>3</sub> is represented by:  and the other



R<sub>3</sub> is represented by:

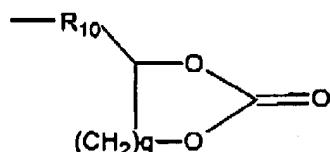
;

R<sub>4</sub> is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



R<sub>5</sub> is represented by:

;



R<sub>6</sub> is represented by:

;

R<sub>7</sub> is hydrogen; alkyl or aryl; R<sub>8</sub> is alkyl or aryl; R<sub>9</sub> is oxygen or an organic spacer; R<sub>10</sub> is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

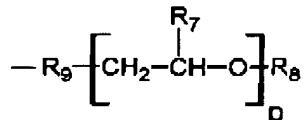
Application No: 10/810,019 Docket No.: Q198-US1

Page 4

14. (previously presented) The device of claim 13, wherein a ratio of n:m is in a range of 10:1 to 100:1.

15. (canceled)

16. (previously presented) The device of claim 13, wherein at least one  $R_3$  is represented



by:

17. (previously presented) The device of claim 16, wherein  $R_9$  is an organic spacer.

18. (canceled)

19. (previously presented) The device of claim 13, wherein at least one  $R_3$  has a different structure from another  $R_3$ .

20. (previously presented) The device of claim 13, wherein each  $R_3$  has a different structure from each  $R_5$  and from each  $R_6$ .

21. (previously presented) The device of claim 1, wherein the average molecular weight for the polysiloxane is less than or equal to 3000 g/mole.

22. (previously presented) The device of claim 1, wherein the electrolyte includes lithium ions, and wherein a  $[O]/[Li]$  ratio is 5 to 50,  $[O]$  being the molar concentration of the active oxygens in the electrolyte and  $[Li]$  being the molar concentration of the lithium ions in the electrolyte.

23. (previously presented) The device of claim 1, wherein the electrolyte is a liquid.

24. (previously presented) The device of claim 1, wherein the electrolyte is a solid.

Application No: 10/810,019 Docket No.: Q198-US1

Page 5

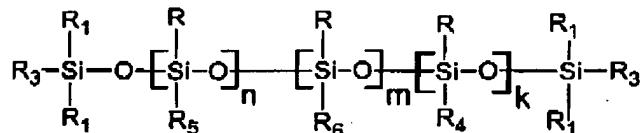
25. (canceled)

26. (previously presented) The device of claim 1, wherein the polysiloxane is a member of an interpenetrating network.

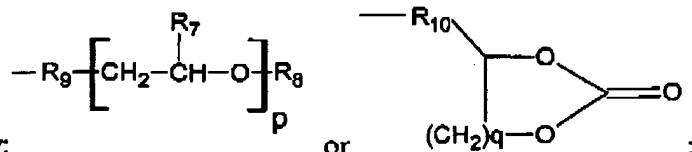
27. (previously presented) The device of claim 1, wherein the electrolyte has a conductivity better than  $1.0 \times 10^{-4}$  S/cm at 25 °C.

28-54. (canceled)

55. (currently amended) An electrochemical device, comprising:  
an electrolyte including a polysiloxane represented by:

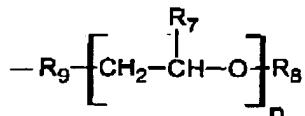


where R is alkyl or aryl; R<sub>1</sub> is alkyl or aryl;

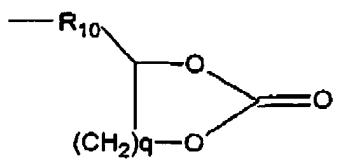


**R<sub>3</sub>** is represented by:

**R<sub>4</sub>** is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



$R_s$  is represented by:



$R_6$  is represented by:

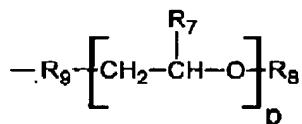
Application No: 10/810,019 Docket No.: Q198-US1

Page 6

R<sub>7</sub> is hydrogen; alkyl or aryl; R<sub>8</sub> is alkyl or aryl; R<sub>9</sub> is oxygen or an organic spacer; R<sub>10</sub> is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

56. (previously presented) The device of claim 55, wherein a ratio of n:m is in a range of 10:1 to 100:1.

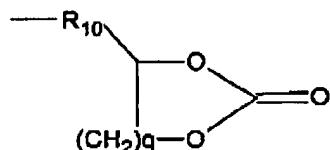
57. (previously presented) The device of claim 55, wherein at least one R<sub>3</sub> is represented



by:

58. (previously presented) The device of claim 57, wherein R<sub>9</sub> is an organic spacer.

59. (previously presented) The device of claim 55, wherein at least one R<sub>3</sub> is represented by:



60. (previously presented) The device of claim 55, wherein at least one R<sub>3</sub> has a different structure from another R<sub>3</sub>.

61. (previously presented) The device of claim 55, wherein each R<sub>3</sub> has a different structure from each R<sub>5</sub> and from each R<sub>6</sub>.